National Institute of Environmental Health Sciences

Climatic variables and transmission of falciparum malaria in New Halfa, eastern Sudan

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Abstract:

The study investigated the role of climatic variables and irrigated agricultural on the seassonality of malaria transmission in New Halfa, eastern Sudan. A time-series analysis was performed usiing monthly climatic variables, monthly water available for irrigation of crops and monthly slide positive rate of malaria during the period 1986–2002. Cases of malaria were reported every month of the year with a mean of 13.0/100 persons/month (95% CI: 11.9–14.2), and bimodal annual pattern in autumn and winter seasons. Rainfall was the significant climatic variable in the transmission of the disease, whereas heavy rainfall was found to initiate epidemics. Temperature, relative humidity and irrigation water were not significant factors.

Source: http://apps.who.int/iris/bitstream/10665/117219/1/13_1_2007_17_24.pdf
http://www.ncbi.nlm.nih.gov/pubmed/17546901

Resource Description

Early Warning System: ☑

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

A focus of content

Exposure : ☑

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Food/Water Security, Meteorological Factors, Precipitation, Temperature

Temperature: Fluctuations

Geographic Feature: ☑

resource focuses on specific type of geography

Other Geographical Feature

Other Geographical Feature : savannah

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Africa

African Region/Country: African Country

Other African Country: Sudan

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Mosquito-borne Disease

Mosquito-borne Disease: Malaria

Mitigation/Adaptation: ☑

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology: ☑

type of model used or methodology development is a focus of resource

Outcome Change Prediction

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Short-Term (

Vulnerability/Impact Assessment: ☑

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content